

**First B. Pharm (Ayurveda) Degree Regular/Supplementary Examinations
April 2021**

Pharmaceutical Chemistry

Time: 3 hrs

Max marks: 100

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space
- Answer all parts of a single question together • Leave sufficient space between answers
- Draw Diagrams wherever necessary • Write equations wherever necessary

Essays**(2x10=20)**

1. Give general mechanism of nucleophilic addition reaction of carbonyl compound.
2. Explain Friedel-Craft alkylation and acylation with mechanism

Short notes**(10x5=50)**

3. Define hybridization. Explain sp^2 hybridization with an example.
4. Explain preparation and assay of borax.
5. Give properties and uses of cyclopropane.
6. Give chemical reactions of amine.
7. Give preparations of carboxylic acid.
8. Explain carbanion and its stability
9. Explain E_1 and E_2 reaction.
10. Different test to distinguish between aldehyde and ketone.
11. Explain limit test for iron.
12. Give occurrence and properties of mercury.

Answer briefly**(10x3=30)**

13. Difference between sigma (σ) and pi (π) bond.
14. Explain pyrolysis in alkanes.
15. Explain Huckel rule
16. Reactions of calcium.
17. Draw and explain energy profile diagram of SN_1 reaction
18. Give structure of cyclopentane, ethylene glycol, cinnamaldehyde
19. Grignard synthesis of alcohol
20. Formation of ester from phenol by Schotten-Baumann technique
21. Applications of IR spectroscopy.
22. Explain Williamson's synthesis.